

## REQUEST FOR SOIL MECHANICS SERVICES

FOR USE OF ORIGINATING OFFICE	FOR USE OF TESTING
FACILITY FROM: _____	
_____	WORK ORDER NO.: _____
_____	
TECHNICAL APPROVAL: _____	DATE SAMPLES RECEIVED: _____
APPROPRIATION & FINANCIAL PROJECT: _____	
DATE: _____	
CONTACT PERSON: _____	

1. NUMBER OF SAMPLES: UNDISTURBED \_\_\_\_\_ DISTURBED \_\_\_\_\_
2. SITE OR PROJECT: \_\_\_\_\_
3. WATERSHED OR LOCATION: \_\_\_\_\_
4. DESCRIPTION OF PROJECT (PLANS, PROFILES, AND SITE INVESTIGATION REPORTS SUBMITTED): \_\_\_\_\_

(Date)

A. EARTH DAM CONSTRUCTION: STRUCTURE CLASS (TR-60) _____		MAXIMUM HEIGHT OF DAM _____
ELEVATIONS: TOP OF DAM _____	PERMANENT POOL _____	EMERGENCY SPILLWAY _____
INVERT OF PRINCIPAL SPILLWAY OUTLET _____	UPSTREAM BERM _____	DOWNSTREAM BERM _____
WIDTH: UPSTREAM BERM _____	DOWNSTREAM BERM _____	FLOODWATER DETENTION TIME _____
PROPOSED SLOPES: UPSTREAM _____	DOWNSTREAM _____	CLASS OF COMPACTION _____
DRAINAGE AREA _____ (ACRES) (SQ. MI.)		

## B. OTHER PROJECTS (SPECIFY-SOIL CEMENT STABILIZATION, POND SEALING, CHANNEL, ETC.)

5. JOB TO BE DESIGNED BY (SPECIFY- NRCS, STATE, CONSULTANT, OR OTHER) \_\_\_\_\_
6. COPIES OF REPORT TO: \_\_\_\_\_
7. REMARKS ON ANALYSES DESIRED: \_\_\_\_\_

**INSTRUCTIONS for PL-566, RC&D, CO-01 Dams, etc.:**

1. All MO-ENG-C356 Forms shall be approved by or have concurrence by the State Conservation Engineer or by their representative. Normally this is the specialist with Soil Mechanics Responsibility.
3. Distribution:
  - a. One copy of MO-ENG-C356 Form and supporting information to Soil Mechanics Lab.
  - b. One copy of MO-ENG-C356 Form and supporting information to State Conservation Engineer.
  - c. Maintain one copy of MO-ENG-C356 Form and supporting information in Project Files or Case Files.
  - d. Maintain one copy of MO-ENG-C356 Form and supporting information in Project Files or Case Files on dams over 35 feet in height for sending to Missouri Dam Safety Council.
3. Form MO-ENG-C356 can be filled out by typing or printing clearly.
4. Appropriations and financial project should be shown if work is WP-01, WP-08, RC&D, EQIP, etc.
5. Assistance in filling out this form can be provided by state specialist with Soil Mechanics Responsibilities.
6. Additional guidance is contained in:
  - a. National Engineering Manual Part 531 with Missouri Supplements.
  - b. Geology Note 5 for guidance on sample size filed in National Engineering Handbook Section 8 (NEH 8) Chapter 3.
  - c. Copies of above are available from State Office Engineering Section.

**INSTRUCTIONS for Animal Waste Storage Basins or Treatment Lagoon**

1. All MO-ENG-C356 Forms shall be approved by or have concurrence by the State Conservation Engineer or by their representative. Normally this is the Area Engineer or designated Engineer for Animal Waste Storage Basins or Treatment Lagoons.
2. Identify special testing criteria under item 7. REMARKS ON ANALYSIS DESIRED.

For Example: The state of Missouri requires that the coefficient of permeability must be less than  $1.0 \times 10^{-7}$  cm/s. Please run the test at 95% of standard proctor and at optimum moisture. (OPTIONAL STATEMENT: If the result of the compacted permeability test is greater than  $1.0 \times 10^{-7}$  cm/s, please rerun the test using (Name of Soil Amendment) treatment necessary to obtain a coefficient of permeability equal to or less than  $5.0 \times 10^{-8}$  cm/s.)

3. Information to be submitted to Soil Mechanics Lab:
  - Cover Memo (Example available)
  - Sample Information or Soil Sample List
  - MO-ENG-C356 (List special conditions or procedures requested)
  - MO-ENG-C357 (List special conditions or procedures requested)
  - Log and Map of test pit locations
  - MDNR Geologic Evaluation (process wastewater systems)
  - Sample of soil amendment to be used
4. Distribution:
  - a. One copy of MO-ENG-C356 Form and supporting information to Soil Mechanics Lab.
  - b. One copy of MO-ENG-C356 Form and supporting information to State Conservation Engineer.
  - c. Maintain one copy of MO-ENG-C356 Form and supporting information in Case Files.
  - d. Maintain one copy of MO-ENG-C356 Form and supporting information for sending to Missouri Department of Natural Resources for Permit or Letter of Approval.
5. Form MO-ENG-C356 can be filled out by typing or printing clearly.
6. Appropriations and financial project should be shown if work is CO-01, EQIP, etc.
7. Assistance in filling out this form can be provided by Area Engineer or Environmental Engineer.
8. Additional guidance is contained in:
  - a. National Engineering Manual Part 531 with Missouri Supplements.
  - b. Geology Note 5 for guidance on sample size filed in National Engineering Handbook Section 8 (NEH 8) Chapter 3.
  - c. Letter on "Soil Testing for Evaluating and Designing Animal Waste Treatment and Storage Structures" from Hugh Curry dated January 9, 1997.
  - d. Copies of above are available from State Office Engineering Section.

***Example cover memo for submitting soil sample to Soil Mechanics Laboratory for an animal waste storage basin or treatment lagoon.***

TO: Soil Mechanics Laboratory  
(Address)

A soil sample from the (producer's operation), County Name, Missouri, has been submitted for analysis. Please see the attached forms MO-ENG-C356 and MO-ENG-C357 for the requested soil mechanics services and laboratory analysis.

Please call me at xxx-xxx-xxxx if you have any questions.

Name  
Area Engineer or Designated Engineer

*Because of the variability in sites, put site specific notes on forms MO-ENG-C356 and MO-ENG-C357.*

*Send sample of soil amendment to be used if the soil mechanics lab does not have a sample for evaluation.*

*List any additional forms sent.*

***Provide Sample Information, Putting this information on Soil Sample List (MO-ENG-C534) is satisfactory, especially if more than one sample.***

**Sample Information:**

State: Missouri

County:

Site:

Funding:

Log of Test Pit or Boring:

Field Sample No.:

Collector:

Date:

***Provide Log of Test Pit or Boring. Putting this information on Log of Test Holes (MO-ENG-C533, MO-ENG-81, or MO-ENG-C81) is satisfactory.***